

Scaled data based on original data using
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-State
Lighting Products

Test Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

Brand: FAIL-SAFE

Report Number: P312803

Luminaire Tested: **22FCZ2-29HE-UNV-L83050-CP125-W2A-U-4500K**

Issue Date: 3/3/2020

This test was performed under the Supervised Manufacturer's Testing Program. The results of this test have not been influenced by sources from within Cooper Lighting Solutions or from external interests.

Test Information

Test Method: LM-79-08
Report Number: P312803
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-33)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 22FCZ2-29HE-UNV-L83050-CP125-W2A-U-4500K
Description: 2'X2' TROFFER LED MODULE, RIBBED LENS, 0.125" POLYCARB SHEET
Light Source: (168) 4500K TUNABLE CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER
Luminaire Equipment:

<u>Sample No.</u>	<u>Condition</u>	<u>Description</u>
AS-5443-1	Good	WHITE TWIN R-EVOLVE FLOOD
AS-5443-2	Good	REFLECTOR
AS-5443-3	Good	DRIVER
AS-5443-4	Good	UPPER MODULE
AS-5443-5	Good	LENS
AS-5443-6	Good	DRIVER 2
AS-5443-7	Good	TRIM RING

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2659.0 lumens
Efficiency: N/A
Efficacy: 113.1 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.28 / 1.37
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

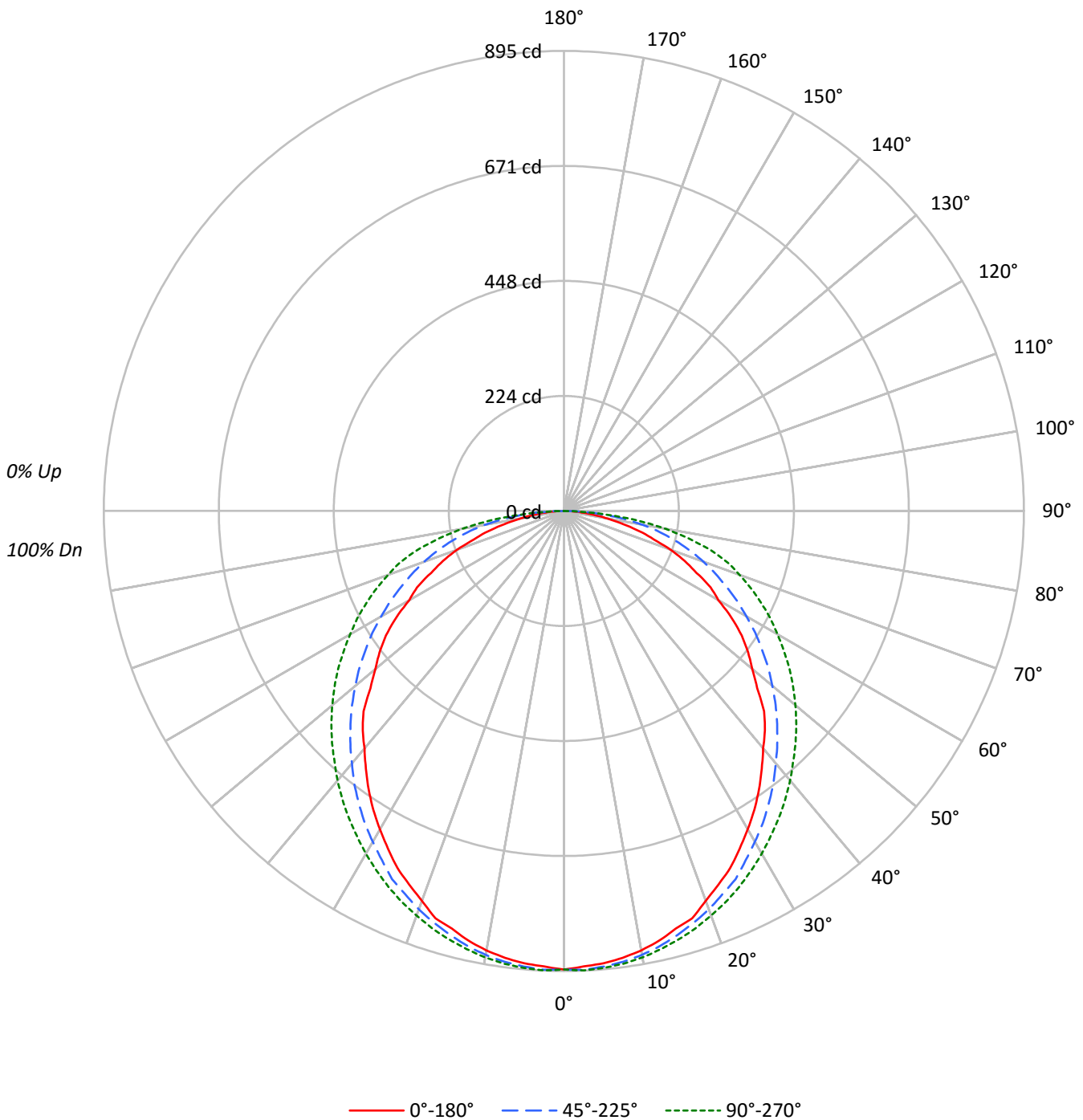
Input Watts (W): 23.5
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20				20				20	
RC	80				70				50				30				10	0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
RCR																		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	108	103	98	94	105	100	96	92	96	93	90	92	89	87	89	86	84	82
2	98	89	82	76	95	87	80	75	83	78	73	80	75	71	77	73	70	67
3	89	78	69	62	86	76	68	62	73	66	61	70	64	60	68	63	59	56
4	81	69	60	53	79	67	59	52	65	57	51	62	56	51	60	55	50	48
5	74	61	52	45	72	60	51	45	58	50	44	56	49	44	54	48	43	41
6	69	55	46	39	67	54	45	39	52	44	39	51	44	38	49	43	38	36
7	64	50	41	35	62	49	40	34	47	40	34	46	39	34	45	38	34	32
8	59	45	37	31	58	45	36	31	43	36	30	42	35	30	41	35	30	28
9	55	42	33	28	54	41	33	28	40	33	27	39	32	27	38	32	27	25
10	52	38	30	25	51	38	30	25	37	30	25	36	29	25	35	29	25	23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2401	2401	2401
5°	2386	2403	2410
10°	2372	2396	2410
15°	2344	2379	2404
20°	2311	2362	2398
25°	2275	2347	2396
30°	2222	2309	2392
35°	2174	2283	2395
40°	2119	2253	2405
45°	2097	2233	2426
50°	2003	2216	2462
55°	1982	2209	2514
60°	1870	2206	2582
65°	1815	2220	2699
70°	1742	2273	2864
75°	1588	2342	3083
80°	1361	2425	3116
85°	1099	2319	2671



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	84.4	3.2
10°-20°	240.8	9.1
20°-30°	362.4	13.6
30°-40°	435.0	16.4
40°-50°	454.7	17.1
50°-60°	423.7	15.9
60°-70°	347.5	13.1
70°-80°	234.2	8.8
80°-90°	76.3	2.9
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	687.7	25.9
0°-40°	1122.7	42.2
0°-60°	2001.1	75.3
0°-90°	2659.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2659.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	892	892	892	892	892	
5°	883	886	890	891	892	84
15°	841	846	854	862	863	238
25°	766	771	790	802	807	352
35°	662	671	695	719	729	414
45°	551	555	587	622	638	421
55°	422	430	471	515	536	374
65°	285	298	349	400	424	284
75°	153	169	225	276	296	161
85°	36	51	75	88	86	42
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	892.1	892.1	892.1	892.1	892.1
2.5°	887.0	889.6	893.4	894.7	894.7
5°	883.2	885.8	889.6	890.8	892.1
7.5°	876.8	879.4	884.5	887.0	888.3
10°	867.9	870.5	876.8	880.7	881.9
12.5°	856.5	859.0	866.7	871.8	873.0
15°	841.2	846.3	853.9	861.6	862.8
17.5°	831.0	829.8	839.9	848.8	851.4
20°	806.9	813.2	824.7	834.8	837.4
22.5°	786.5	791.6	806.9	818.3	823.4
25°	766.1	771.2	790.3	801.8	806.9
27.5°	740.7	748.3	766.1	782.7	789.0
30°	715.2	722.9	743.2	762.3	769.9
32.5°	689.8	698.7	720.3	740.7	749.6
35°	661.8	670.7	694.9	719.0	729.2
37.5°	632.5	644.0	669.4	696.1	707.6
40°	603.2	614.7	641.4	672.0	684.7
42.5°	579.0	584.1	614.7	647.8	660.5
45°	551.1	554.9	586.7	622.3	637.6
47.5°	510.3	524.3	558.7	598.1	613.4
50°	478.5	493.8	529.4	571.4	588.0
52.5°	451.8	462.0	501.4	543.4	562.5
55°	422.5	430.2	470.9	515.4	535.8
57.5°	386.9	400.9	441.6	487.4	507.8
60°	347.4	365.2	409.8	459.4	479.8
62.5°	322.0	332.2	380.5	430.2	453.1
65°	285.1	297.8	348.7	399.6	423.8
67.5°	254.5	267.3	319.4	370.3	394.5
70°	221.4	234.2	288.9	339.8	364.0
72.5°	183.3	201.1	258.3	309.3	334.7
75°	152.7	169.3	225.3	276.2	296.5
77.5°	118.4	140.0	192.2	234.2	249.4
80°	87.8	109.4	156.5	187.1	201.1
82.5°	59.8	81.4	117.1	140.0	147.6
85°	35.6	50.9	75.1	87.8	86.5
87.5°	16.5	21.6	30.5	30.5	29.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)